



Installation & User Manual

Clamp Open Guard® Switch Activated Models 6806868 and 6806869

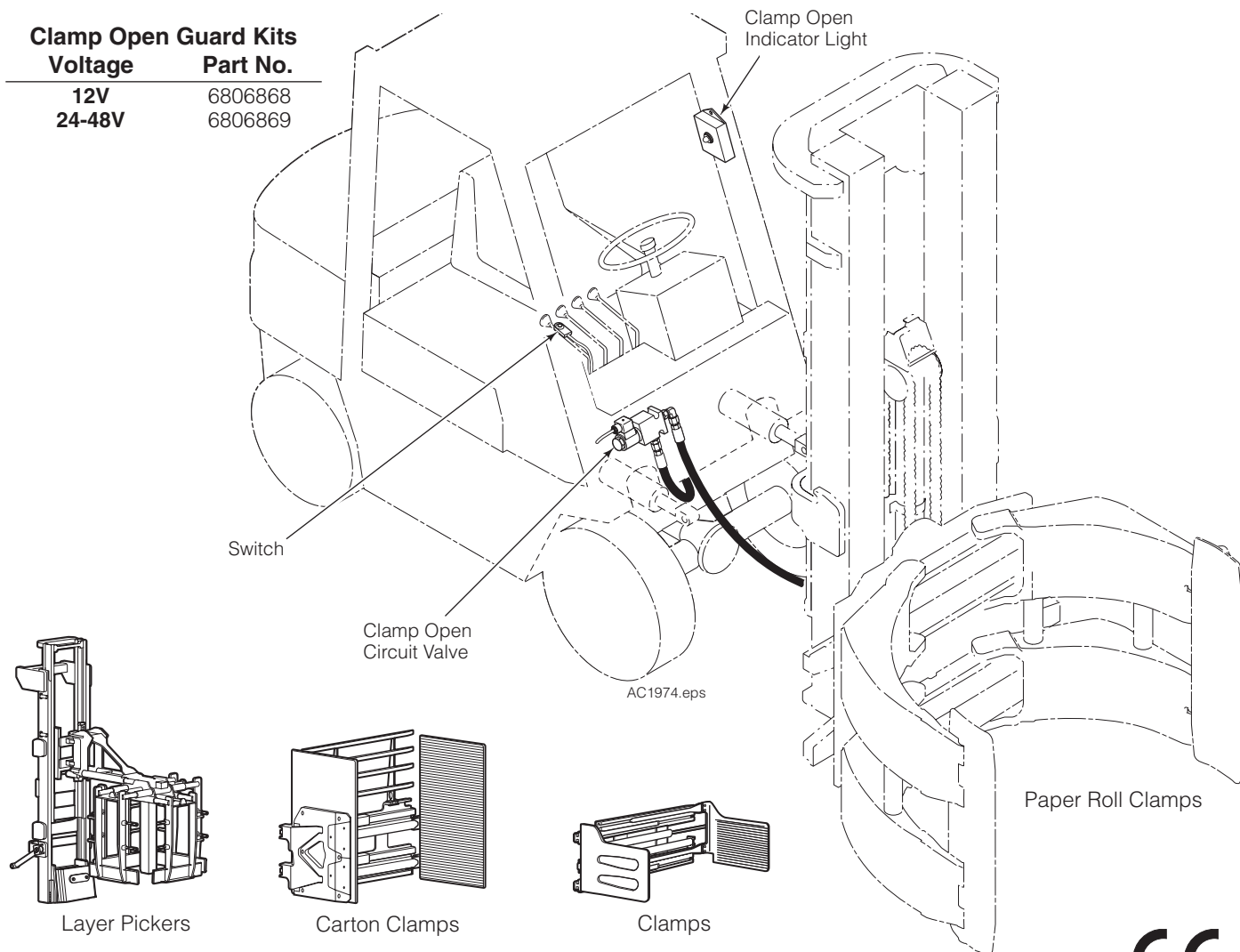
This manual provides installation instructions for Cascade Clamp Open Guard. The kit provides an added level of security to prevent accidental load dropping. Clamp Open Guard requires a definitive action by the driver to help prevent accidental unclamping. The kit is intended for use with all Cascade load bearing Clamps to conform with ANSI/ITSDF B56.1, Section 7.25.7.

NOTE: Kits are UL Classified (File # AU3546) for safety in Electric Battery (UL 583) and IC Engine (UL 558) Indust. Truck type E, ES, G, GS, G/LP/ GS/LPS, LP, LPS, D and DS.

NOTE: UL Classified Kits require installation by qualified personnel only without major disturbance, cutting, splicing or soldering of factory installed wiring.

Clamp Open Guard Kits

Voltage	Part No.
12V	6806868
24-48V	6806869



Part No. 6806872-R4

cascade®
corporation

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Cascade Corp.
File No. AU3546



Installation

Perform by Qualified Personnel only.

1 Disconnect the cable from the positive battery terminal.

2 Locate and install the solenoid valve and spacer on the truck cowl using customer supplied .25 in. (6 mm) fasteners. Watch for clearance when the mast is tilt all the way back. The valve is being installed in the clamp OPEN line from the auxiliary valve to the attachment.

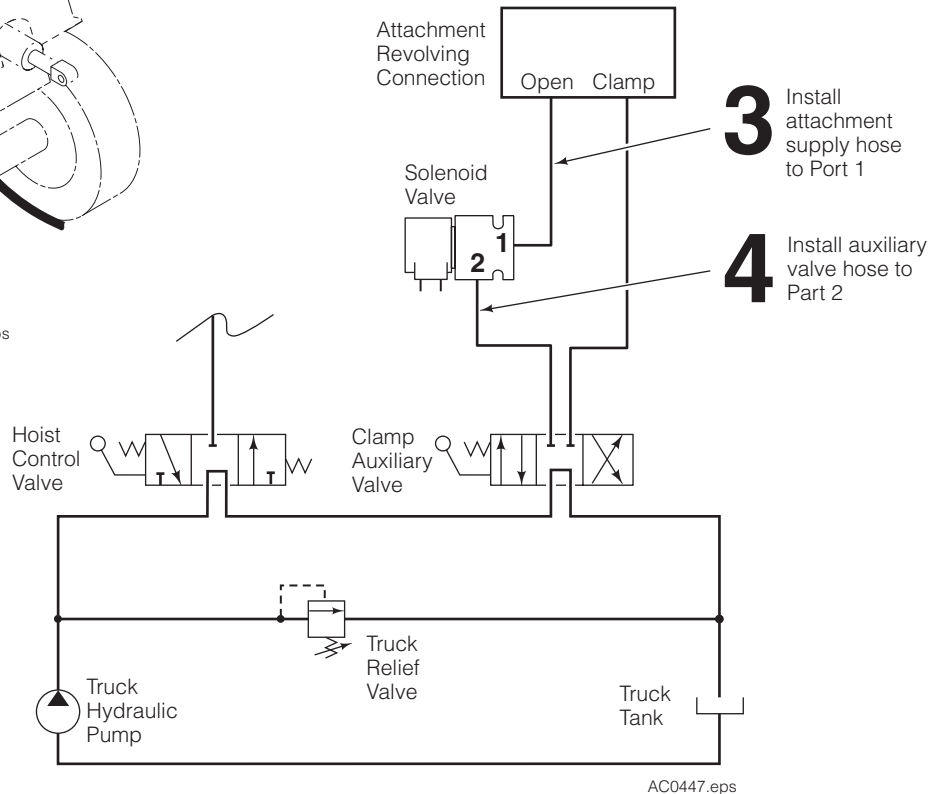
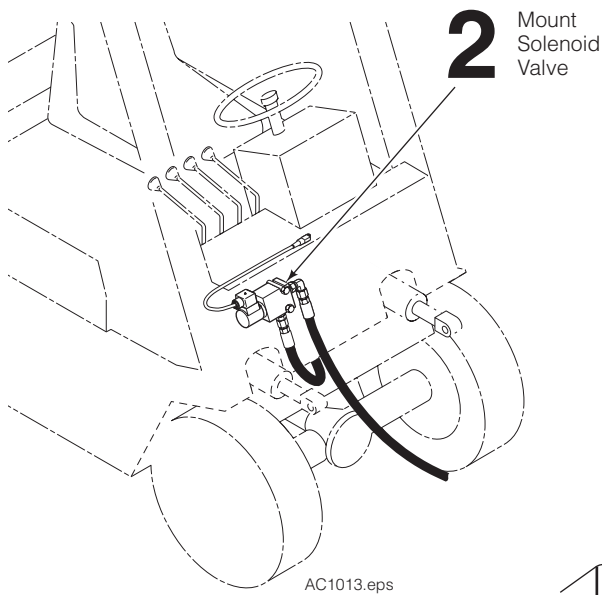
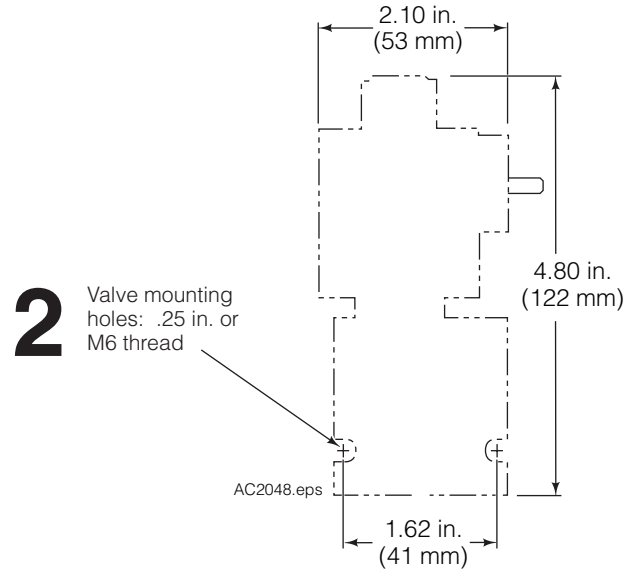
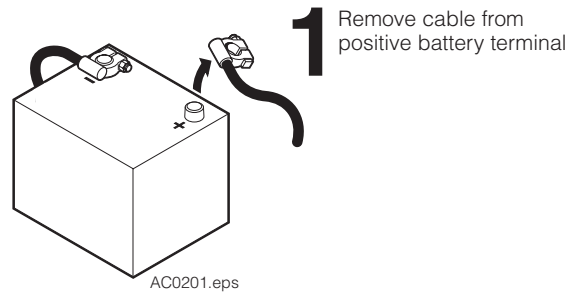
IMPORTANT: The valve must be installed in the open circuit ahead of any clamp line check valve pilot lines. Do not install the coil adjacent to any RF or control devices/electronics.

3 Connect control valve port 1 to the supply hose going to the attachment.

IMPORTANT: When installing the Clamp Open Guard with Cascade's Adaptive Force Control (AFC), the solenoid valve must be installed between the truck auxiliary valve and the AFC valve.

4 Connect solenoid valve port 2 to the supply hose from the truck auxiliary valve clamp OPEN line.

IMPORTANT: Verify by visual test, Installation steps 2, 3 and 4.



5 Install cab indicator light on the truck dashboard, overhead guard, or any other easy to see location using customer supplied hardware OR the Velcro strip provided. Clean the mounting surfaces prior to installing the Velcro.

6 Install the switch to the clamp control lever.

Remove the control knob. Position the switch on the handle in a location for comfortable thumb or index finger operation. **IMPORTANT:** Place the double sided tape under the switch to secure the switch in place. Place the heat shrink tubing over the handle and switch. Using a heat gun, heat the tubing to secure the switch to the handle. Reinstall the knob. Install cable ties as needed for the wires. Avoid pulling, bending or pinching the switch wire.

NOTE: UL Classified Kits require installation by qualified personnel only without major disturbance, cutting, splicing or soldering of factory installed wiring.

CAUTION: Consult the Lift Truck OEM for proper + power source connection.

7 Connect cable ends to the components as shown.

12V Systems – Connect the fused positive wire from the cable harness to a 12V switched power source, and the ground wire to a chassis ground.

24V–48V Systems – Connect the fused positive wire from the cable harness to a DC-to-DC converter positive output wire and the ground wire to the converter negative output wire. Connect converter inputs to the voltage filter outputs. Connect a 24V–48V switched power source to the voltage filter input wire and connect the filter input ground wire to a chassis ground.

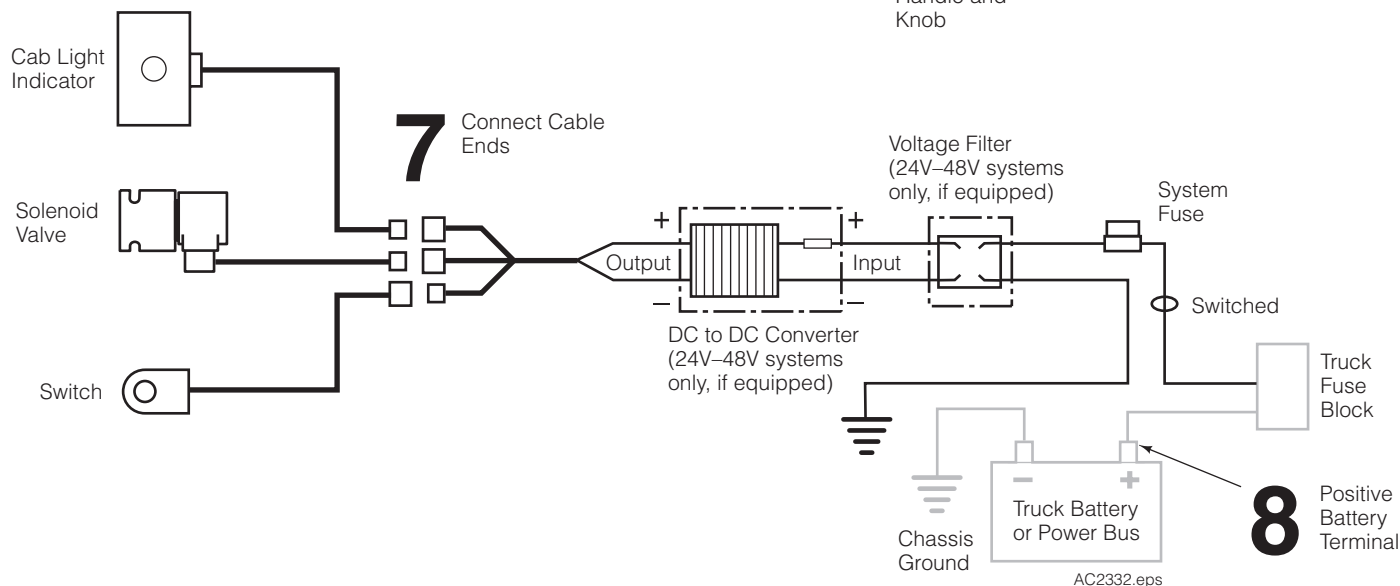
Check the cable routing for pinch points and clearance. Use wire ties as needed.

NOTE: When installing on electric trucks, voltage filter 6061953 must be installed. Failure to install voltage filter can cause damage to electrical components.



WARNING: To reduce risk of fire, replace only with the same type and ratings of fuse. The fused power cable is polarity sensitive. The positive wire must be connected to a positive power source.

8 Reconnect the positive battery terminal to the battery.



Test and Adjustment

Perform by Qualified Personnel only.

- 1 Test the installation before putting the truck in service. When the truck key is turned ON, the green light should be off.
- 2 Press the button and observe that the green light turns on.
- 3 Hoist a load 1 in. off the ground. Operate the clamp open handle several times, the clamp should not open. Lower the load to the ground. Press the button to release the load. Verify that the green light is on while pressing the button.

Operation



WARNING: All operators must read this section.

Before operation, inspect the switch, indicator, valve, wiring and test operation daily.

Operators must have a thorough knowledge and understanding of the safe operation of the attachment with which the Clamp Open Guard is used.

The Clamp Open Guard provides an added level of security to prevent accidental load dropping per current ANSI standards. Clamp Open Guard requires a definitive action by the driver to help prevent accidental unclamping. It acts as a device to prevent accidental activation of the truck's clamp open circuit. The clamp is allowed to open when the switch is activated and the green light on.

- Press the switch button, then operate the truck clamp open control lever to open the clamp. When the green light is on, the clamp will open normally.
- If the clamp will not open when the button is pressed, set the load down, turn off the truck key and troubleshoot the system. Follow Test and Adjustment before returning to service.

NOTE: The system does not work like a drop stop valve that prevents carriage drop or jump when the clamp is opened. The green light does not indicate that the load has been lowered to its optimal position.



WARNING: Residual risk exists to personnel in the work area, operate only in compliance to facility, state and federal standards.

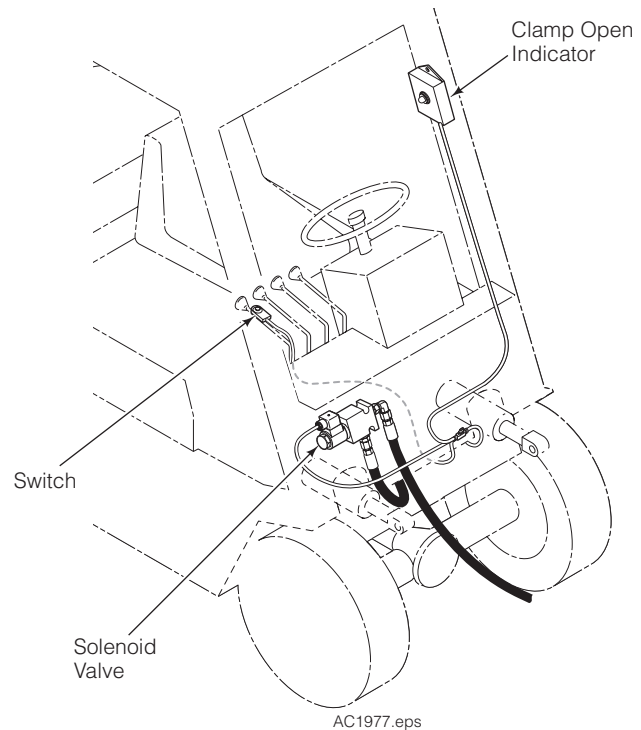
For this accessory:

- a) The Weighted Emission Sound Pressure Level (LpA) does not exceed 70 dB(A).
- b) The Value of Whole Body Vibration does not exceed $0,5 \text{ m/s}^2$.
- c) The Value of Hand-Arm Vibration does not exceed $2,5 \text{ m/s}^2$.

Troubleshooting

Service only after reading this manual and by Qualified Personnel only.

- Check all system fuses.
- Verify 12VDC at switch connector.
- Check switch function (N/O switch).
- Check 12VDC at solenoid when switch is pressed.
- Check for 12VDC at Indicator Light when switch is pressed.

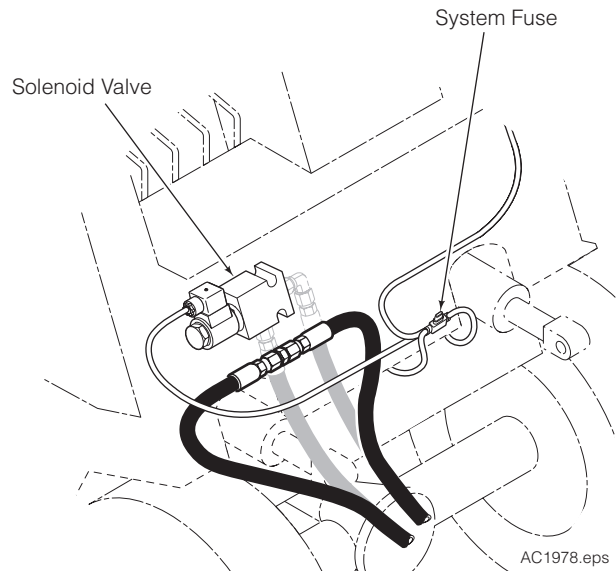


Temporarily Disabling System

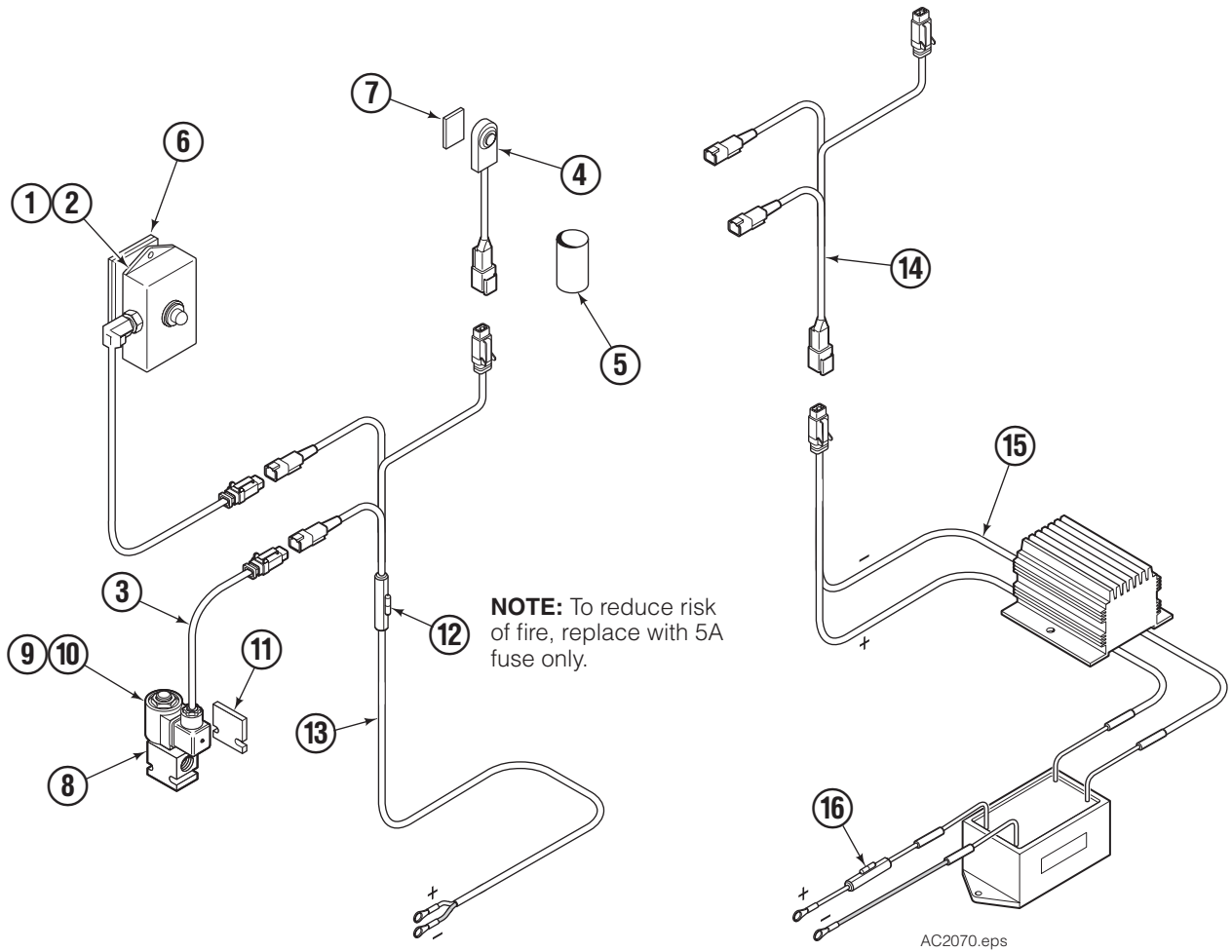
The Clamp Open Guard can be disabled by performing the following steps:

- Tag equipment as not operational. Do not operate when system is disabled or known to malfunction.
- Disconnect the two hose ends to the normally-closed solenoid valve and connect them together with a union.
- Remove the system power fuse in the cable harness to disable indicator light.

The truck and attachment will now operate without the Clamp Open Guard feature. To enable the Clamp Open Guard, reverse the above procedure.



Clamp Open Guard®



REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6806868	12V Clamp Open Guard ●	8	1	6813193	Solenoid Valve Assembly
		6806869	24V-48V Clamp Open Guard ■	9	1	6813173	Coil, 12V ▲
1	1	6806867	Clamp Open Indicator	10	1	6020883	Solenoid Cartridge ▲
2	1	6004132	Lamp, Green	11	1	6048803	Spacer
3	1	6008301	Solenoid Wire Harness	12	1	6806707	Fuse, 5 Amp
4	1	6806863	Switch Kit	13	1	6806865	Power Harness, 12V
5	1	6822532	Shrink Tube, 1.5 in. (40 mm) ◆	14	1	6816503	Power Harness, 24-48V
6	2	6029665	Velcro	15	1	6816341	Converter Kit
7	1	6014987	Adhesive Tape ◆	16	1	6806701	Fuse, 2 Amp

● Items 1–13.

■ Items 1–11, 14, 15 and 16.

◆ Included in Switch Kit 6806863.

▲ Included in Solenoid Valve Assembly 6813193.

Do you have questions you need answered right now? Call your nearest Cascade Service Department.
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AMERICAS

**Cascade Corporation
U.S. Headquarters**
2201 NE 201st
Fairview, OR 97024-9718
Tel: 800-CASCADE (227-2233)
Fax: 888-329-8207

Cascade Canada Inc.
5570 Timberlea Blvd.
Mississauga, Ontario
Canada L4W-4M6
Tel: 905-629-7777
Fax: 905-629-7785

Cascade do Brasil
Rua João Guerra, 134
Macuco, Santos - SP
Brasil 11015-130
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

EUROPE-AFRICA

**Cascade Italia S.R.L.
European Headquarters**
Via Dell'Artigianato 1
37050 Vago di Lavagno (VR)
Italy
Tel: 39-045-8989111
Fax: 39-045-8989160

Cascade (Africa) Pty. Ltd.
PO Box 625, Isando 1600
60A Steel Road
Sparton, Kempton Park
South Africa
Tel: 27-11-975-9240
Fax: 27-11-394-1147

ASIA-PACIFIC

Cascade Japan Ltd.
2-23, 2-Chome,
Kukuchi Nishimachi
Amagasaki, Hyogo
Japan, 661-0978
Tel: 81-6-6420-9771
Fax: 81-6-6420-9777

Cascade Korea
121B 9L Namdong Ind.
Complex, 691-8 Gojan-Dong
Namdong-Ku
Inchon, Korea
Tel: +82-32-821-2051
Fax: +82-32-821-2055

Cascade-Xiamen
No. 668 Yangguang Rd.
Xinyang Industrial Zone
Haicang, Xiamen City
Fujian Province
P.R. China 361026
Tel: 86-592-651-2500
Fax: 86-592-651-2571

**Cascade India Material
Handling Private Limited**
No 34, Global Trade Centre
1/1 Rambaugh Colony
Lal Bahadur Shastri Road,
Navi Peth, Pune 411 030
(Maharashtra) India
Phone: +91 020 2432 5490
Fax: +91 020 2433 0881

Cascade Australia Pty. Ltd.
1445 Ipswich Road
Rocklea, QLD 4107
Australia
Tel: 1-800-227-223
Fax: +61 7 3373-7333

Cascade New Zealand
15 Ra Ora Drive
East Tamaki, Auckland
New Zealand
Tel: +64-9-273-9136
Fax: +64-9-273-9137

**Sunstream Industries
Pte. Ltd.**
18 Tuas South Street 5
Singapore 637796
Tel: +65-6795-7555
Fax: +65-6863-1368

